In the Specification:

At page 14, after the third full paragraph insert the following:

Fig. 1 shows a sectional drawing of a monopolar technique;

Fig. 2 shows a schematic sectional view of a supposed layer structure;

Fig. 3 shows a circuit diagram of an equivalent resistance network for a measuring electrode;

Fig. 4 shows a part of a circuit arrangement in which measuring prism cells are formed by resistances;

Fig. 5 shows a distribution of dissipation power in simulate skin layers of a simplified equivalent resistance model;

Fig. 6 shows a graph of temperature distribution against the skin layer and the elements;

At page 14, amend the fourth full paragraph as follows:

FIG. 8A and 8B shows a part of a circuit arrangement for another embodiment for the device according to the invention;

At pages 19-20, amend the last full paragraph on page 19 which carries over onto page 20 as follows:

A complete electronic simulation of directional dependence would require four further equivalent resistances Rh for each measuring electrode. Because of symmetric reasons, however, cross currents flow to the surgical site in the muscle in only one horizontal direction, e.g. in the direction of the columns (y direction), which is why the horizontal equivalent resistances in the direction of the row (x direction) may be neglected and all equivalent resistances 56 positioned in one row of the measuring electrode matrix may be combined in

one equivalent resistance 61, which may be positioned outside the measuring range of the temperature sensor, as is shown in the exemplary embodiment of Fig. 8A and 8B, where the vertical resistances 43, 54 are represented as impedance 55 and the horizontal resistances Rh of the muscle tissue in the column direction are represented as resistances 56. A voltage source 33 for operating the device according to the invention is arranged between the neutral electrode 1 and the horizontal equivalent resistances 61, which represent the horizontal resistances Rh of the muscle tissue in the column direction, are positioned outside the spatial measuring range of the temperature sensor, and do thus not influence the temperature measurement. The invention also allows the exchange of the x and y directions, which requires the outside arrangement of the horizontal resistances Rh for the row direction of the measuring electrode matrix.

Support for these amendments appear elsewhere in the specification and in the drawings originally filed.